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**UNITED STATES PATENT AND TRADEMARK OFFICE**

**Examiner:** D. Rosario-Vasquez      **Art Unit:** 2621

*In re:*

**Applicant:** SICIGNANO

**Serial No.:** 09/848,655

**Filed:** 05/04/2001

**A M E N D M E N T**

I hereby certify that this correspondence is  
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date indicated above and is addressed  
to the Assistant Commissioner of Patents  
and Trademarks, P. O. Box 1450  
Alexandria, VA 22313-1450

*Ostrosnoou*  
ILYA ZBOROVSKY

Commissioner for Patents  
P. O. Box 1450  
Alexandria, Virginia

Sir:

Responsive to the Office Action of February 27, 2004, please  
amend the application as follows:

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**LETTER**

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08/27/2004  
LYAZBOROVSKY

Commissioner for Patents  
P. O. Box 1450  
Alexandria, Virginia

Sir:

Responsive to the Office Action of February 27, 2004, an  
Amendment was filed on May 9, 2004.

Upon status request it was indicated that the Amendment was  
not received by the US PTO.

A copy of the Amendment is again submitted herewith.

Please accept the Amendment and continue the  
prosecution.

Respectfully submitted,

Ilya Zbrovsky  
Agent for Applicant  
Reg. No. 28563

In the claims:

1. (Currently amended) A method of quantitative determination of an image drift in a digital imaging microscope, comprising the steps of using a pattern which has a plurality of features spaced from one another into mutually perpendicular directions; producing a set of images of the pattern with certain time intervals therebetween; and determining an offset of each of the features in the set of the thusly obtained images as an image drift; using the pattern which includes four said features, with two of the features spaced in one direction and two of the features spaced in a perpendicular direction; and determining a center of each feature, said determining an offset including determining an offset of said center of each of said four features in said set of images of said pattern.

Claims 2-4 cancelled.

5. (Currently amended) A method as defined in claim 31, wherein said determining an offset the centers of the features is performed in two mutually perpendicular directions.

Claim 6 cancelled.

**7. (Original) A method as defined in claim 1; and further comprising providing a plurality of patterns which are different from one another by at least one parameter selected from the group consisting of a size of each feature and a magnitude of a space between the features, and selecting a pattern in correspondence with a size range of measurements to be performed by a scanning electron microscope.**

**8. (Original) A method as defined in claim 1; and further comprising providing a plurality of patterns which are different from one another by at least one parameter selected from the group consisting of a size of each feature and a magnitude of a space between the features, and selecting a pattern in correspondence of a drift acceptable by a user of the scanning electron microscope.**

**9. (Original) A method as defined in claim 1; and further comprising a step of representing the thusly determined image drift graphically on a display screen.**

**10. (Original) A method as defined in claim 1; and further comprising representing the thusly determined image drift in a digital form.**

11. (Original) A method as defined in claim 1; and further comprising comparing the thusly determined drift with a predetermined image drift threshold; and providing an answer whether the scanning electron microscope with the thusly determined drift can be utilized or not for metrology purposes.

12. (New) A method of quantitative determination of an image drift in a digital imaging microscope, comprising the steps of using a pattern which has a plurality of features spaced from one another into mutually perpendicular directions; producing a set of images of the pattern with certain time intervals therebetween; determining an offset of each of the features in the set of the thusly obtained images as an image drift using the pattern which includes four said features, with two of the features spaced in one direction and two of the features spaced in a perpendicular direction; and determining a center of each feature, said determining an offset including determining an offset of said center of each of said four features in said set of images of said pattern, said determining an offset includes also determining central point between said centers of said features, said determining of an offset includes determining an offset of said central points in said set of images.

13. (New) A method of quantitative determination of an image

**drift in a digital imaging microscope, comprising the steps of using a pattern which has a plurality of features spaced from one another in two mutually perpendicular directions; producing a set of images of the pattern with certain time intervals therebetween; using the pattern which includes four said features, with two of the features spaced in one direction and two of the features spaced in a perpendicular direction; determining an offset of each of the features in the set of the thusly obtained images as an image drift, said determining an offset of said centers of said features is performed so as to determine turning of said centers of said features.**

REMARKS

The last Office Action has been carefully considered.

It is noted that claims 1, 2, 3, 4, 5, 6, and 9-11 are rejected under 35 U.S.C. 102(b) over the patent to Elings.

The other claims are rejected under 35 U.S.C. 103(a) over the patent to Elings in view of the patent to Kotabashi.

Also, the disclosure is objected to.

In connection with the Examiner's objection to the disclosure, applicants have renumbered the specification.

After carefully considering the Examiner's grounds for the rejection of the claims, applicants have canceled claims 2, 3, 4, and 6, amended claim 1, and added independent claims 12 and 13.

It is respectfully submitted that claim 1 as amended clearly and patentably distinguish the present invention from the prior art applied by the Examiner.

**Claim 1, the broadest claim on file, defines a method of quantitative determination of an image drift in a digital imaging microscope which uses a pattern including four features, with two features spaced in one direction and two features spaced in a perpendicular direction, wherein a center of each feature is determined and an offset of each feature in a set of images of pattern is determined as an offset of the center of each of the features.**

Turning now to the references and in particular to the patent Elings, it can be seen that this reference discloses a feature which is identified with reference numeral 44. This is a single feature, and not four features. There is no four features in which a center of each feature is determined so as to obtain four centers spaced from one another in two mutually perpendicular direction, and then to determine an image drift as an offset of four centers of four features.

It is believed to be clear that this reference does not teach the new features of the present invention as now defined in the amended claim

1. The same is true with respect to the secondary reference.

The Examiner rejected the original claims over the patent to Elings as anticipated. This reference does not teach the new features of the

amended claim 1. In connection with this, applicant wants to cite the decision in *re Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984) in which it was stated:

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim."

Definitely, the reference does not contain all elements of claim 1 as amended. It is therefore believed that the Examiner's anticipation rejection should be considered as no longer tenable with respect to the amended claim 1 and should be withdrawn.

The Examiner's attention is respectfully directed to the features of claims 12 and 13. Claim 12 specifically defines that an image drift is determined, based on an offset of the central points between the centers of the features. The new features of the present invention as defined in claim 11 are also not disclosed in the references.

Claim 13 specifically defines that an image drift is determined by turning or rotation of the centers of the features in a set of pattern images. While the patent to Elings discloses a drift velocity vector, this has nothing to do with turning or rotation of the centers of the features. The turning or rotation is determined by first determining the centers of the features in the

**images of the patterns in a set, and then determining the displacement or turning, or rotation of the centers of the positions of the individual features in the images of the patterns. The new features of the present invention as defined in claim 13 are also not disclosed in the references and can not be derived from them as a matter of obviousness.**

**It is believed that claims 12 and 13 should be considered as patentably distinguishing over the art per se.**

**Reconsideration and allowance of the present application is most respectfully requested.**

**Should the Examiner require or consider it advisable that the specification, claims and/or drawings be further amended or corrected in formal respects in order to place this case in condition for final allowance, then it is respectfully requested that such amendments or corrections be carried out by Examiner's Amendment, and the case be passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, he is invited to telephone the undersigned (at 631-243-3818).**

**Respectfully submitted,**



Ilya Zborovsky  
Agent for Applicant  
Reg. №. 28563